Decoupling Revenues from Sales: Some DSM Issues for Consideration

A Presentation to the Delaware PSC Decoupling Task Force

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If you don't know where you're going...

Any road will take you there.

Why Decouple?

- Remove utility disincentive to promote energy efficiency.
- Stabilize utility revenues, earnings.

Let's explore the EE reasons

- Today, if a utility increases sales, it increases profits.
- And, if a utility's sales go down, its profits go down.
  - This effect is *heightened* for distribution-only utilities.
- It's natural for a utility to resist energy efficiency when its profits are tied to greater and greater use.
- SO, if we want a utility to help reduce sales, we need to address this source of resistance.

Before Deciding We Need to Decouple...

- First let's decide if DSM is going to be the utility's job.
  - If so, we ***may*** want to decouple – for reasons of effectiveness and fairness.
- If not, decoupling will be less valuable as a DSM-facilitator.
  - And we might only want to decouple for reasons of fairness, or non-DSM reasons.

When Did Efficiency Become the Utility's Job?

- In many states, negawatts have become a utility service:
  - In the 1970's, with RCS, federal and state governments saw a way to promote efficiency without raising taxes.
  - Starting in 1980's, when vertically-integrated utilities wanted to build new plant, utilities had to show they'd done all C/E DSM:
    - Consumer/environmental advocates in regulatory proceedings demanded that utilities show new supply cost less than all alternatives, including efficiency
    - Utilities at the time had best knowledge of end-uses, and
    - It was clear the market was not capturing all cost-effective efficiency.
  - Since then, DSM in IRP legislation/policy, DSM legislation, DSM in restructuring statutes, etc. ---
- Many states have made utility DSM programs their key approach to fostering electricity and gas efficiency.

Delaware Says: Utility DSM = One Policy Option

- Per HB 6 (2006), utilities to do 10 year IRP.
- DEC to continue existing efficiency efforts.
- ***PSC may*** *order DP&L to develop and implement Demand-Side Management programs*
  - **to reduce overall electricity consumption and/or**
  - to reduce usage by customers during peak periods
  - Advance metering docket opened at PSC to study
- Meanwhile, S.C.Rs. 45 and 6 (2006, 2007) set up Task Force to look at Sustainable Efficiency Utility.

Some States/DSM Offerings Use Non-Utility Administration

- E.g., Vermont, Wisconsin, New York
  - Money comes from ratepayers
  - But is paid over to an independent entity
  - Which runs programs to foster efficiency.
  - Utility's job is just to raise money and pay over.
- PAYS® market reform does not need utility administration.
  - With PAYS® costs are recovered over time on utility bill, and pass with meter, not with individual customer.
  - Even so, utility role could be limited to collecting PAYS® charges from participants, and paying them over to independent administrator.
- Delaware Sustainable Energy Utility would not use utility administration
  - And only a little bit of utility-raised ratepayer money.

Say we do have utilities administer DSM

- In what ways can a utility help with efficiency?
  - Or variously, how could a utility impede efficiency?
- If we understand the utility's role in promoting efficiency,
- we can understand the likely *impact of utility resistance* to efficiency on its achievement.

Why have DSM programs at all???

- If a customer wants to improve her end-use efficiency, she can go out today and buy a more efficient widget, right?
- Or an ESCo will install widgets in your business and share the savings with you, right?
- And, if so, why does the utility need to get involved at all?
- And if the market is taking care of it, there's no need to consider decoupling and a utility's incentives, right?

Because markets aren't perfect

- Markets don't tap a fraction of cost-effective efficiency
  - (see SEU Final Report April 21).
- Most electricity/gas users cannot play in the market.
  - E.g. renters, those without capital, those unwilling/unable to take on more debt, those not sure they'll be in premises long, etc.
- There are real "market barriers" to customers choosing all efficiency measures that are cost-effective for society in the long-run.
  - What's good for society in the long-run is not always smart for consumers, if they can't be sure they'll enjoy the long-run benefit....
- And we still want the efficiency to be tapped.

SO: GOAL = OVERCOME MARKET BARRIERS, RIGHT?

- DSM role should be to identify market barriers,
- And design responses that overcome them,
- For all customers, as a matter of efficiency and equity.

Market Barriers, 1

- **For Large Institutions (after Kulakowski/Lachman):**
  - predominance of SHORT payback period as a decision-making tool
    - Resulting in lack of financing
  - existence of split incentives, and Principal/Agent splits
    - Renter pays utilities, can't safely make big investments in efficiency
    - Purchaser of business' widgets does not pay its electricity bills
  - transaction costs (financial hoops, work-flow adjustments) facing most energy-efficiency project proposals
  - The business of the entity is not energy consumption
    - To the business, energy is just an expense

Market Barriers, 2

- **For Small Consumers (per ACEEE/Lachman):**
  - Tendency of consumers to emphasize initial cost at the expense of future benefits,
  - Lack of access to financing,
  - Split incentives, as above,
  - Lack of importance, for certain consumers, of the relatively small dollar savings achieved through energy-efficient investments,
  - Effects of transaction costs on consumer decision-making, and
  - Risk customers will not recover their investment if they relocate or if measure fails prematurely.

How Do Utility Programs Address These Market Barriers?

- Most utility programs do one of two things:
  - Buy down up front costs of measures, to reduce payback time and risk of unrealized investment.
  - Provide information to customers.
- Some also try to reduce transaction hassles:
  - On-the-bill financing,
  - Technical assistance with contract negotiation process
- Some concentrate on the vendors, trying to incent them to stock more efficient stuff.
  - Again, primarily with rebates.
- Some use ESCo-type Shared Savings deals
- PAYS® -
  - Not a "program" so much as a market reform.
  - Unlike other programs, can overcome split incentives, other persistent barriers
    - Non-utility financing
    - On the bill; runs with the meter – no persistent debt
    - Utility only needs to bill and collect PAYS® charges.

Why is a Willing Administrator Important?

- Potential breakdowns in traditional DSM:
  - Budgets – much less than enough to tap all DSM?
  - Design of program – devil is in the details
    - Poor choice of measures/specifications
    - Build in more hassles/hoops to go through
  - Marketing offerings?
    - Just enough to use budget, or
    - Gauge full potential and go get it.
  - Designed to meet customers' needs?
    - Or just respond to squeaky wheels
    - Lookin' good for regulator vs. aggressively facilitating DSM
  - Incur unnecessary costs unrelated to savings.
    - But recoverable in rates
  - Poor evaluation protocols
    - Don't know how program is working
    - Can't fix or improve program.

So, How Get DSM Results?

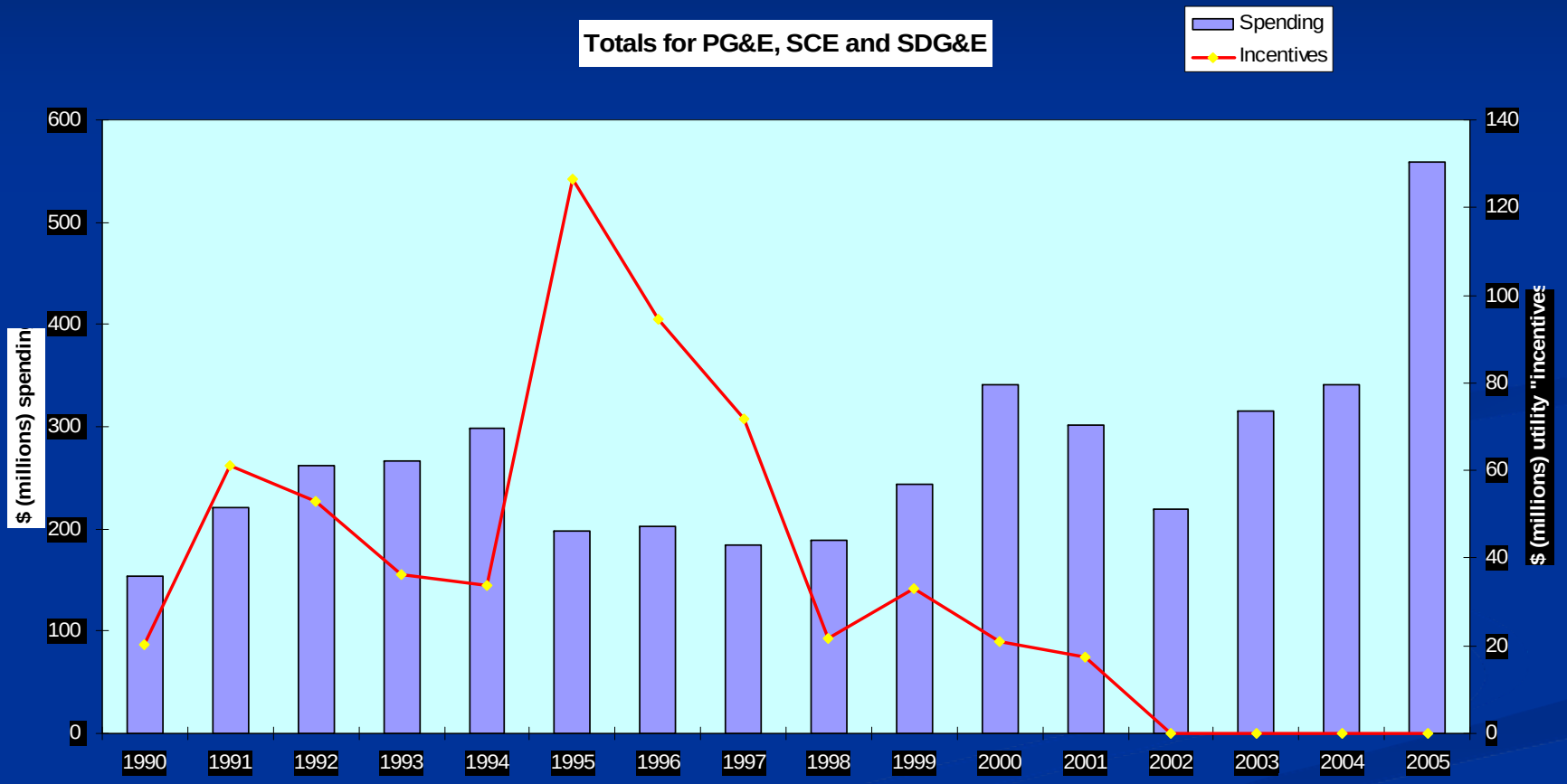
- Give job to someone other than an entity whose profits depend on sales, and/or
- Reform market altogether, and eliminate need for administrator to push efficiency
  - PAYS®, and/or
- Eliminate preference for sales/Create incentive for efficiency.
  - Decouple revenues/earnings from sales.
  - Add sweetener for superior DSM results?

Is there a link between Decoupling and utility efforts?

- How ***do*** we measure intensity of utility DSM efforts?
  - Traditional measure = spending levels:
    - Spending per capita,
    - Spending as a % of revenues
  - Spending is not the best measure
    - Can spend without achieving much
  - Better to include "Program Cost/$ of Measures Installed"
    - But no one reports it
    - So we can't readily compare efficiency of efficiency programming.
- But, spending is the tool available. What does it show?

Decoupling/Incentives vs. Budgets

Source: TURN, UtilityData_ budgets, spending, incentives, 1990-2005.



Decoupling/Incentives vs. Budgets

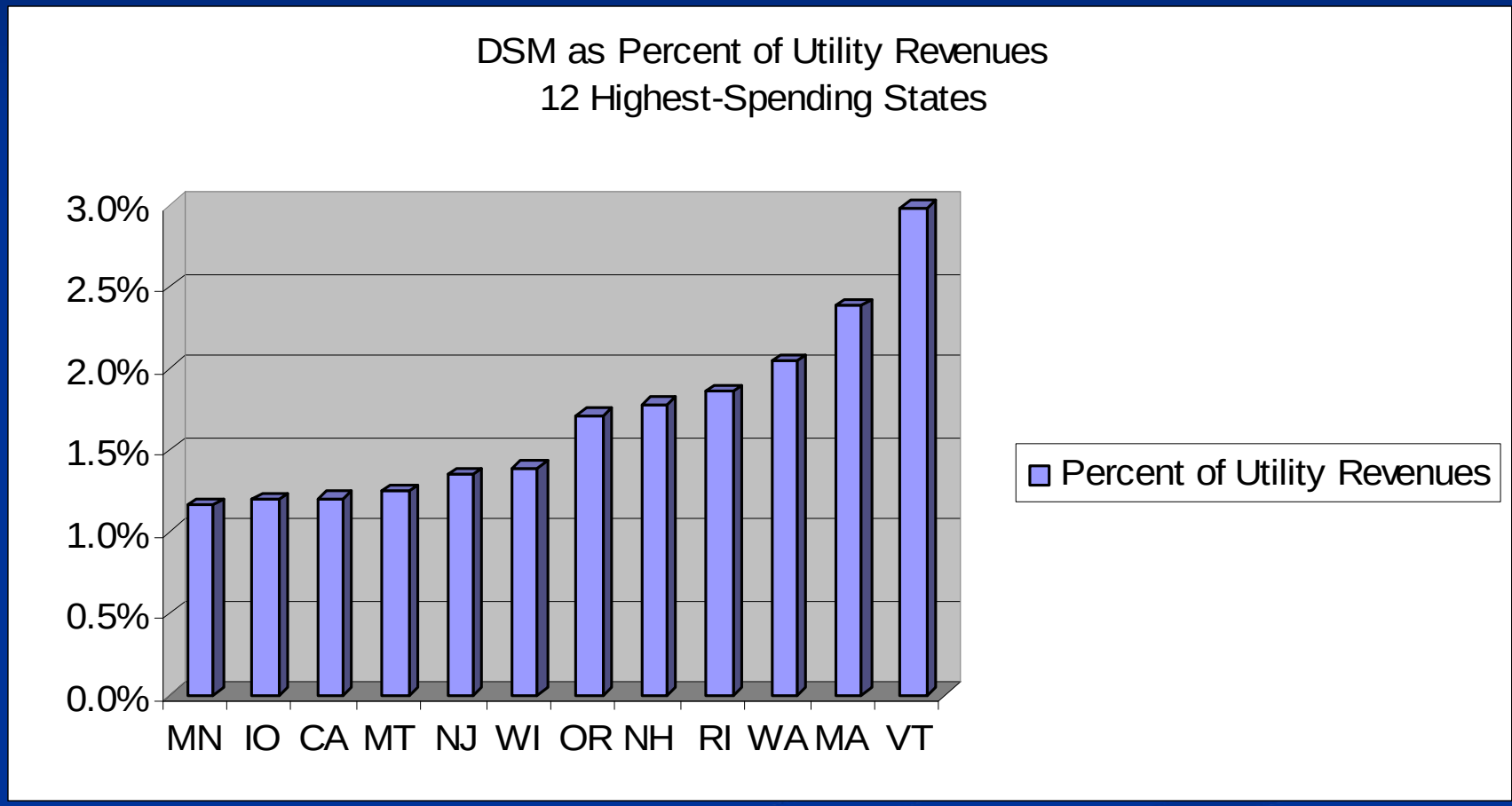
Sources: ACEEE "Aligning Utility Interests With Energy Efficiency Objectives," and ACEEE's 3rd National Scorecard

State	Incentives Aligned?	Non-Utility Administr.	Spending per capita	Spending @ % Revenues
CO	N	N	$ 1.85	0.3%
FL	N	N	$ 3.62	0.4%
ID	N	N	$ 5.16	0.6%
IL	N	Y	$ 0.24	0.0%
IO	N	N	$ 10.17	1.2%
ME	N	Y	$ 8.03	0.9%
MT	N	N	$ 10.65	1.3%
NJ	N	Y	$ 11.31	1.4%
NM	N	N	$ 0.50	0.1%
NY	N	Y	$ 7.46	0.8%
TX	N	N	$ 3.68	0.3%
UT	N	N	$ 4.29	0.8%
WA	N	N	$ 15.21	2.0%
WI	N	Y	$ 11.33	1.4%
VT	N^^	Y	$ 28.26	3.0%
OH	N**	N	$ 1.37	0.2%
AZ	Y	N	$ 0.38	0.1%
CA	Y	N	$ 9.34	1.2%
MA	Y	N	$ 21.49	2.4%
MN	Y	N	$ 8.65	1.2%
NV	Y	N	$ 5.00	0.5%
NH	Y	N	$ 16.45	1.8%
RI	Y	N	$ 14.13	1.9%
OR	Y**	Y^	$ 13.44	1.7%

Non-Utility Admin vs. Budgets

State	Incentives*	Non-Utility Administr.	Spending per capita	Spending @ % Revenues	Savings @ Percent Sales
CO	N	N	$ 1.85	0.3%	1.3%
FL	N	N	$ 3.62	0.4%	2.6%
ID	N	N	$ 5.16	0.6%	3.5%
IO	N	N	$ 10.17	1.2%	2.8%
MT	N	N	$ 10.65	1.3%	3.9%
NM	N	N	$ 0.50	0.1%	0.1%
TX	N	N	$ 3.68	0.3%	1.6%
UT	N	N	$ 4.29	0.8%	3.2%
WA	N	N	$ 15.21	2.0%	7.2%
CA	Y	N	$ 9.34	1.2%	7.5%
MA	Y	N	$ 21.49	2.4%	5.8%
MN	Y	N	$ 8.65	1.2%	6.7%
NV	Y	N	$ 5.00	0.5%	0.2%
NH	Y	N	$ 16.45	1.8%	2.5%
RI	Y	N	$ 14.13	1.9%	6.2%
OH	Y**	N	$ 1.37	0.2%	0.3%
AZ	Y	N	$ 0.38	0.1%	0.2%
IL	N	Y	$ 0.24	0.0%	0.1%
ME	N	Y	$ 8.03	0.9%	0.5%
NJ	N	Y	$ 11.31	1.4%	3.8%
NY	N	Y	$ 7.46	0.8%	3.0%
WI	N	Y	$ 11.33	1.4%	4.4%
VT	Y	Y	$ 28.26	3.0%	4.8%
OR	Y**	Y^	$ 13.44	1.7%	6.0%
Average of states with U admin			$ 7.76	0.9%	3.3%
Average of states w/non-U admin			$ 11.44	1.3%	3.2%

Implicit Ceiling On DSM?



Correlation?

- No one claims to show a correlation,
  - Much less causation. Harder still to separate incentive results from decoupling results.
  - Could be lots of causes.
  - Lots of variation in data.
  - Doesn't show what would happen without incentives or decoupling.
- Better results with non-utility administration?
  - But again, not statistically valid yet
- PAYS® -
  - Not driven by utility efforts – entirely market-drive
  - So, incentives should not make a difference
  - But not enough data yet

Meanwhile, still decouple?

- If state policy is "lower utility sales", is decoupling fair no matter who administers?
- Is it warranted to reduce return requirement?
  - Shifts risk of lower sales to consumers
    - For whatever causes
  - Lowers RoE
    - by how many basis points?
  - Whether this is a good deal is a separate question.
- As Staff witness said – up to utilities to prove benefits outweigh shift of risks.

Questions?